

Conclusions Direct genotypic testing of routine gonococcal NAAT-positive genital samples allows for safe use of ciprofloxacin in gonorrhoea but may have limited impact, particularly for men until available at the point of care.

P5.099 METRONIDAZOLE ANTIMICROBIAL DRUG RESISTANCE TESTING OF *TRICHOMONAS VAGINALIS* COLLECTED FROM WOMEN ATTENDING AN ANTI-RETROVIRAL CLINIC, PRETORIA, SOUTH AFRICA

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¹I Rukasha, ^{1,2}M M Ehlers, ^{1,3}M M Kock. ¹Department of Medical Microbiology, University of Pretoria, Pretoria, South Africa; ²Tshwane Academic Division, National Health Laboratory Service, Pretoria, South Africa; ³Tshwane Academic Division, National Health Laboratory Services, Pretoria, South Africa

Background Nitroimidazoles, in particular metronidazole and tinidazole are used to treat anaerobic protozoa, which include *Trichomonas vaginalis*, *Giardia duodenalis* and *Entamoeba histolytica*. In South Africa information about metronidazole resistance of *T. vaginalis* isolates is limited. This pilot study aimed to determine the metronidazole antimicrobial drug resistance and genetic relatedness of *T. vaginalis* isolates obtained from women attending the anti-retroviral clinic at the Tshwane District Hospital, Pretoria.

Methods Self-collected vaginal swabs were collected from HIV positive women until 30 *T. vaginalis* positive samples were obtained. Metronidazole antimicrobial drug resistance of *T. vaginalis* isolates was determined *in vitro* by microdilution and microtitre methods. The strain relatedness was determined by the random amplified polymorphic DNA (RAPD) assay using five primers (TV1, TV2, TV3, TV5 and TV6). Dendrogrammes were constructed from the RAPD assay's fingerprinting data using GelComparII.

Results Metronidazole resistance was detected in 6% (2/30) of the *T. vaginalis* isolates. The minimal inhibitory concentration (MIC) was between 0.06 µg/ml and 25 µg/ml. No correlation was observed between metronidazole resistance and a specific protozoal genetic cluster.

Conclusion A low prevalence of *T. vaginalis* metronidazole resistance was detected in the clinical setting. The MIC values are in agreement with those reported in literature. The two metronidazole resistant isolates are from genetically diverse backgrounds. It is important to monitor the changes in the MIC values of the circulating *T. vaginalis* protozoa to ensure that the syndromic management of trichomoniasis used in South Africa, is adequate.

P5.100 TRENDS IN THE ANTIMICROBIAL SUSCEPTIBILITY OF *NEISSERIA GONORRHOEA* ISOLATES IN BELGIUM (2006–2011)

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T Crucitti, S Abdellati, B De Deken, H Smet, V Cuylaerts, I De Baetselier. *Institute of Tropical Medicine, Antwerp, Belgium*

Background Increased resistance of *Neisseria gonorrhoeae* to antimicrobials has been reported worldwide, jeopardising the treatment of gonorrhoea. In order to provide guidance in treatment guidelines a national gonococcal antimicrobial surveillance programme has been installed in Belgium. We present here the data collected from 2006 till 2011.

Methods All Belgian laboratories are asked to send *N. gonorrhoeae* strains isolated in their laboratories to the national reference laboratory where Minimal Inhibitory Concentrations (MIC) are determined using the agar dilution assay according to the Clinical and Laboratory Standard Institute (CLSI). The MICs for ceftriaxone (cef), spectinomycin (spe), ciprofloxacin (cip), azithromycin (azi), penicillin (pen), and tetracycline (tet) are determined. The MIC breakpoints recommended by CLSI are applied, except for azithromycin for which

the breakpoints recommend by the Centers for Disease Control and prevention are used.

Results The following table summarises the antimicrobial resistance per year

Abstract P5.100 Table 1

Year	N	β lactamase	cef	spe	cip	azi	pen	tet
		% present	% DS	% R	% I	% R	% I	% R
2006	332	10.2	0.0	0.0	1.2	61.4	2.6	51.8
2007	484	10.3	0.0	0.0	0.0	60.3	3.1	49.6
2008	510	16.9	0.0	0.0	1.0	57.5	1.6	50.8
2009	522	18.2	0.0	0.0	3.8	63.2	2.1	44.6
2010	537	19.2	0.0	0.0	0.9	60.9	8.2	36.5
2011	501	11.4	0.0	0.0	1.2	57.1	2.6	54.9

R: resistance; I: intermediate susceptibility; DS: decreased susceptibility

Conclusions The current Belgian guidelines recommend ceftriaxone as first- and spectinomycin as second line treatment for gonorrhoea. Although a decreased susceptibility or resistance was not observed, shifts in MIC are closely followed up. In addition, alternatives for treatment have to be sought in the event of emerging resistance.

P5.101 RISING TREND OF ANTIMICROBIAL RESISTANCE AMONG *NEISSERIA GONORRHOEA* ISOLATES IN A CENTRAL DELHI TERTIARY CARE HOSPITAL

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T Bharara, P Bhalla, V Garg, A Chakravarti, K Sardana, D Rawat, V Patwardhan. *Maulana Azad Medical College, New Delhi, India*

Background Gonorrhoea continues to be a common sexually transmitted disease (STD) in developing countries. Over the last decade, *N. gonorrhoeae* has developed resistance against antimicrobial agents such as penicillin, tetracycline and quinolones in several countries including India. Monitoring the antimicrobial susceptibility of gonococcal isolates is essential for early detection of antimicrobial resistance.

Methods In our STD laboratory, all gonococcal isolates are subjected to antimicrobial susceptibility testing by disc diffusion method as per CLSI guidelines. β-lactamase production is determined by chromogenic cephalosporin test. Minimum Inhibitory Concentration (MIC) for ceftriaxone is determined by E-test. WHO reference strains are used for quality control. We regularly participate in an External quality assurance scheme (EQAS) - Gonococcal Antimicrobial Susceptibility Program (GASP) under WHO.

Results The number of cases of gonorrhoea and hence gonococcal isolates has declined in our hospital over the years. A significant increase in penicillinase producing *N. gonorrhoeae* (PPNG) has been observed. The percentage of PPNG increased from 8% in 1997 to 13% in 2007 and 84.2% in 2011–2013. Quinolone resistant *N. gonorrhoeae* (QRNG) showed a significant increase from 12% in 1997 to 98.7% in 2007, while 89.47% isolates were found to be QRNG by 2011–2013. Although the percentage of tetracycline resistant *N. gonorrhoeae* (TRNG) has decreased over the years, overall percentage of isolates resistant to tetracycline increased. In January 2013 we detected our first gonococcal isolate with decreased susceptibility to third generation cephalosporins; Ceftriaxone, Cefixime and Cefpodoxime.

Conclusion The results of our study highlighted an alarming increase in the percentage of PPNG and QRNG strains over the last 16 years. Emergence of *N. gonorrhoeae* isolates with decreased susceptibility to third generation cephalosporins is a cause of concern. Thus continuous monitoring of antimicrobial susceptibility of all gonococcal strains circulating in a community should be performed to prevent treatment failures and further spread of resistant strains.